Gathering Application Spatial Map
The project is basically a tool that lists gatherings spatially rather than chronologically. A map application will allow users, via either internet or phone, to see and place markers on a map for various types of social gatherings. Each marker should list pertinent information such as the address, time of the gathering, and type of gathering. The marker should be deletable or disappear upon gathering completion.

Functional Requirements
A User should be able to
- Access this application via web page or Android Application
- View various gatherings on a map of the local area
- Make a gathering
  - edit gathering information
  - delete gathering
- Select gathering and view its information

Quality Requirements
A User should be able to
- Access this application via web page or Android Application
  - Login with unique name and password
- Find and add Friends
- View various gatherings on a map of the local area
  - Filter gatherings by gathering type, friends, or date
- Make a gathering (protected by login)
  - define the type
  - choose novel icon
  - edit their gathering information
  - delete their gathering
- make gathering visible to public, friends, or whitelist (select friends)
- Select gathering and view its information
  - Leave a comment about the gathering
  - Rate the gathering

Platform Requirements

During the course of this project our company will be relying heavily on several tools for documentation. Two of the more frequently used tools will be campus email and Google Drive. Email allows us to log our conversations and easily reach each other and Google Drive allows us to easily collaborate on paperwork, an important tool for individuals with varying schedules.

For the project itself the company plans on using Springsource Tool Suite, STS, to create a stable database with a web application. STS requires Apache Maven, Spring Roo, and a JDK to run. STS also works closely with the DIJIT library for its graphical components.

The project will be web based in nature the company will need a program to convert it into a running web application. As of right now the company plans on using an application creator called PhoneGap. PhoneGap came highly recommend from an outside source.

Process Requirements

Our company would must first make a web based application that communicates with a servlet and database in an efficient and effective manner. We want our web build to be a strong build with the mandatory requirements firmly in place.

Once that has been accomplished the team will split, most of our efforts will be centered around porting the project so it is usable via an android phone. The remaining member of the team will work on incorporating the desirable requirements into the project.

To make the project feasible the GUI must be simple and work well, especially if it is to be expected to work as a phone application. A confusing interface will ruin the usability of the application.
Priority of Requirements

Mandatory Requirements

- Gathering (Point)
  - Placement
    - The users should be able to scroll and zoom on the map. The point will have to be activated then the next click on the map will place the point.
  - Information
    - Clicking the point again should open the point’s information. This should list things such as Location Name, Location Address, Host’s User Name, and Description.
  - Deletion
    - The information should include the option to remove the point
  - Editing
    - The information there should be the option to edit the point’s Location Name, Location Address, Host’s User Name, and Description.

- Map
  - Base Layer
    - The map will be implemented using the openLayers open source library. Due to the scope of this project the map will be limited to the Rolla area.

Desirable Requirements

- Logins
  - Every user should be able to create a unique login and password. Under this login they will be able to create and manage one gathering. They can only edit or delete their own gathering.

- Friends
  - Users should also be able to add friends. Every user can have many friends and a User can belong to many others Users as a friend

- Gathering Visibility (friends, whitelist, public)
  - Not everyone is invited to every gathering because of this the User should be able to broadcast their gathering in a way that fits with their needs. A Public gathering will be visible to all users. A Friends gathering will only be visible to Users that have been marked as ‘friends’. A Whitelist gathering will only be visible to a small list of friends the Users selects.

- Rating System
  - A user should be able to express their experiences about an existing location on a scale that is visible to others. All ratings will be aggregating into an overall score that is visible to all users.

- Comments
  - A user should be able to express their experiences about an existing
location. The comments will be limited by size and visible to all users.

- **Gathering Types**
  - There are several types of gatherings a User should be able to categorize their gathering. This will help other users find the type of gathering they want and also allow the host to attract the users they want to their gathering. The user should also be able to filter the map by specific gathering type.

- **Special Markers**
  - To make the types of gathering more easily recognizable, a user should be able to choose the type of marker that will adorn their gathering. This should make the gathering recognizable on sight to other users. (Gathering Type: birthday, game, holiday, study group...etc.)

- **“Legacy” Gatherings**
  - Some locations are known for certain types of gatherings, especially parties. These locations that are open on a weekly basis have a special layer on the map and the user can choose whether or not they are visible.

- **Search markers**
  - Filter seen markers by day, week, month or all.